Acne Vulgaris

Evaluation of a Medicated Cleansing Pad

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• Using the technique of simultaneous, symmetrical paired comparisons, a medicated cleansing pad that can be easily used at work or at school as an adjunctive in the treatment of acne vulgaris was evaluated.

The experimental pads were significantly beneficial in reducing skin oiliness and in clinical improvement of the acne. Response to standard acne therapy was faster when the pads were used adjunctively, although the significant results seen initially tended to even out as therapy continued.

Use of the medicated pads produced no untoward side effects and were well accepted by patients.

ACNE VULGARIS is a disease having multiple known and unknown etiologic factors. The therapeutic approaches to the treatment of this disease are legion, but if one analyzes the main principles of treatment, it is noted that most are aimed at removing and preventing the comedone component, diminishing the bacterial flora of the skin and reducing the formation and accumulation of sebum and keratinous debris on the skin surface by the use of cleansing methods.

The latter poses a great problem, particularly among teenagers and working people. Instructions for applying medication and avoiding factors which may trigger flare-ups of acne are usually followed quite meticulously. However, adequate and frequent daytime skin cleansing is often neglected, most patients offering the excuse that it is inconvenient or impossible to take medicated soaps to school and to work, let alone spare the time necessary for adequate cleansing of the face.

In the fall of 1960, I began evaluating a medicated cleansing pad* specifically designed for daytime adjunctive therapy in acne vulgaris. The pad is medicated with a lotion containing 50 per cent ethyl alcohol and 1.5 per cent salicylic acid. Its stated purpose is to cleanse excessive oiliness from the skin and exert a mild drying astringent and keratolytic effect. For convenience, a day's supply is carried in a compact-sized container which fits either purse or pocket.

METHOD

The study embraced 30 patients with acne vulgaris, 19 male and 11 female, ranging in age from 13 to 32. Individual patients were observed for periods of from four to forty weeks.

The experimental technique was the method of simultaneous symmetrical paired comparisons, as described by Sulzberger.[2] The method is excellent for canceling out variables, in that similar lesions on the same person are subject to identical influences from the host. Any difference in the clinical response of these lesions to treatment by different agents, therefore, can be considered a measure of the agent's effectiveness.

The study procedure was as follows:

At the time of original examination and diagnosis, the degree of skin oiliness was graded on a 1 to 4 scale. Severity of acne also was graded on a 1 to 4 scale as described by Pillsbury, Shelley, and Kligman.[1]

In this series of cases, the original grading was:

Oiliness		*Acne*	
Grade	*No. Patients*	*Grade*	*No. Patients*
1	1	1	3
2	7	2	16
3	16	3	11
4	6	4	0

Standard therapeutic measures were prescribed as indicated for each patient: Use of hexachlorophene soaps, lotions for day and/or nighttime use, therapeutic shampoos, tetracycline, ultraviolet and supplemental Vitamin A were among those employed.

In addition to the standard treatment specifically prescribed, each patient was instructed to cleanse one side of the face with the experimental pad and the other side with a placebo pad three times daily. The placebo pad was saturated with tap water. Experimental and placebo pads were identical in appearance and were dispensed in identical containers.

In 13 cases the procedure was varied to allow occasional use of placebos for both sides, experimental pads for both sides, or a switch in the sides of the

*Therapads, Fuller Pharmaceutical Company, Minneapolis.

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TABLE 1.—*Results with Experimental Pad as Compared with Placebo Pad in Reduction of Oiliness*

Week of Therapy	No. Patients Observed	Clinical Improvement			Average Clinical Improvement (Per Cent)	
		Greater With Experimental Pad	Greater With Placebo Pad	No Significant Difference	Exper. Pad	Placebo
1	24	21	0	3	59.4	38.3
2	20	19	0	1	63.0	43.5
3	20	19	0	1	74.8	55.8
4	12	8	0	4	73.3	57.1
5	18	11	0	7	82.2	68.1
9 - 10	11	5	0	6	80.9	73.6

TABLE 2.—*Results with Experimental Pad as Compared with Placebo Pad in Control of Acne*

Week of Therapy	No. Patients Observed	Clinical Improvement			Average Clinical Improvement (Per Cent)	
		Greater With Experimental Pad	Greater With Placebo Pad	No Significant Difference	Exper. Pad	Placebo
1	24	16	3	5	42.7	31.3
2	20	16	1	3	45.5	31.3
3	20	14	0	6	58.8	46.3
4	12	8	0	4	59.6	47.1
5	18	10	0	8	65.3	53.7
9 - 10	11	7	0	4	71.4	62.3

TABLE 3.—*Results on Switching Between Experimental Pad and Placebo in Control of Oiliness of Skin*

Change from Placebo to Experimental Pad	
Improved	8
No Change	0
Worse	0
Change from Experimental Pad to Placebo	
Improved	0
No Change	1
Worse	4

TABLE 4.—*Results of Switching Between Experimental Pad and Placebo in Control of Acne*

Change from Placebo to Experimental Pad	
Improved	8
No Change	0
Worse	0
Change from Experimental Pad to Placebo	
Improved	0
No Change	1
Worse	4

face being treated with the experimental pad and the placebo.

At each visit of the patient to the office, changes in degree of oiliness and severity of acne were noted for each side of the face and recorded as a per cent decrease in oiliness and per cent improvement of acne. Improvement in either category was considered significant only if the observable difference was 10 per cent or more.

RESULTS

Routine use of the experimental pads produced beneficial responses both in reducing skin oiliness and in clinical improvement of the acne (Table 1).

Comparative results in clinical improvement of acne are shown in Table 2.

Tables 3 and 4 show the results when the mode of therapy was switched from one side of the face to the other or on one side alone.

DISCUSSION

Routine use of the experimental pads for daytime skin cleansing produced a much more rapid decrease in oiliness and faster clinical improvement of the acne than was achieved with the placebo. The differences in response between the two sides of the face were pronounced in most cases, particularly during the first five or six weeks of therapy. This is further borne out by the improvement noted among patients switched from placebo to experimental pads (Tables 3 and 4), and by better recovery after flare-ups for the side treated with the medicated pad.

It is noteworthy, however, that the significant results seen initially tended to even out in most cases as therapy continued and all aspects of the treatment program began to take effect.

No untoward side effects were associated with use of the medicated pads. The pads were well accepted by the patients. Ten patients commented that the pads caused a mild "burning" sensation; three felt this was somewhat objectionable; one complained that the alcohol fumes "burned" his eyes. However, all these patients indicated the medicine was proving beneficial and even the latter patient preferred the experimental pad because he felt its therapeutic action was superior.

There are indications that the experimental pads are well suited for skin cleansing after surgical dermabrasion when standard acne therapy would be

too stimulating. Two such instances occurred in this series of patients and results in both were good.

Prescribing the medicated pads was a definite aid in encouraging patients to cleanse the face regularly during the day. All of them seemed to appreciate the simplicity and convenience of the pads. It also was my impression that, by stepping up the speed of response to standard acne therapy, the pads provided a psychological lift to most patients and stimulated greater patient cooperation for the total treatment program.

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REFERENCES

1. Pillsbury, D. M., Shelley, W. B., and Kligman, A. M.: Dermatology, W. B. Saunders Co., Philadelphia, 1956.

2. Sulzberger, M. B.: Evaluation of therapeutic agents on the human skin: Method of simultaneous symmetrical paired comparisons (editorial), Clin. Pharmacol. Ther, 3:1-4, 1962.